PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of	Docket No: Q77791
Michael CUYLEN	
Appln. No.: 10/722,499	Group Art Unit: 2138
Confirmation No.: 7666	Examiner: Dipakkumar B. GANDHI

Filed: November 28, 2003

For: METHOD FOR PROTECTED TRANSMISSION OF DATA VIA AN AIR INTERFACE

SUBMISSION OF APPEAL BRIEF

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith please find an Appeal Brief. Please charge the statutory fee of $500.00 to deposit account No.: 19-4880, via EFS payment screen. The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account. A duplicate copy of this paper is attached.

Respectfully submitted,

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WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Date: January 10, 2007

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APPEAL BRIEF UNDER 37 C.F.R. § 41.37

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
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Sir:

In accordance with the provisions of 37 C.F.R. § 41.37, Appellant submits the following:

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I. REAL PARTY IN INTEREST

The real party in interest is SIEMENS AG by virtue of an assignment executed by Michael Cuylen (hereinafter "Appellant") on February 14, 2004 and recorded in the U.S. Patent and Trademark Office on April 27, 2004 at reel 015264 and frame 0597.

II. RELATED APPEALS AND INTERFERENCES

Upon information and belief, there are no other prior or pending appeals, interferences or judicial proceedings known to Appellant's Representative or the Assignee that may be related to, be directly affected by, or have a bearing on the Board's decision in the Appeal.

III. STATUS OF CLAIMS

Claims 1-19 are pending and are the basis of this Appeal.

Claims 1-19 stand rejected. See Claims Appendix for listing of claims.

IV. STATUS OF AMENDMENTS

Appellant did not amend the claims subsequent to the August 11, 2006 Final Office Action. Accordingly, all amendments, which have been made during prosecution of the present application, have been entered and are reflected in the attached Claims Appendix.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

The present invention is directed to a method and system for protected transmission of data. The features of independent claims 1, 11, 13 and 15 are described herein in reference to non-limiting embodiments of Appellant's specification.

Claim 1 - Claim 1 recites a method for protected transmission of data D0-D4 whose coding is represented by a first transmitted sequence FR0-FR4 having a predetermined number of on and off values Z1, Z0 (Fig. 2; para. [0020]). The method involves forming a count C, from the first transmitted sequence FR0-FR4, the count C representing the predetermined number, by changing a counting direction F, R after each on-value Z1 and by incrementing or decrementing the count C for each off-value Z0, and generating error information F1, F2 when a first final value EC of the count C, which, together with the data D0-D4, is transmitted as a second coded sequence SIG of the count C, differs from a second final value EC1, EC2, which is also formed from the first transmitted sequence FR0-FR4 (Fig. 2; para. [023]-[028]).

Claim 11 - Claim 11 recites a mobile data memory DT for non-contacting interchange of a sequence of data items D0-D4 with a reader/writer SLG (Fig. 1; para. [037]). The mobile data memory DT has a first coding device KE1 configured to transmit data D0-D4 whose coding is represented by a first transmitted sequence FR0-FR4 having a predetermined number of on and off values Z1, Z0, and to form a count C, from the first transmitted sequence FR0-FR4, the count C representing the predetermined number of on and off values Z1, Z0, by changing a counting

direction F, R after each on-value Z1 and by incrementing or decrementing the count for each off-value Z0 (para. [023]-[0028]). The first coding device KE1 is further configured to generate error information F1, when a first final value EC of the count, which, together with the data D0-D4, is transmitted as a second coded sequence KE2 of the count, differs from a second final value EC1, which is also formed from the first transmitted sequence FR0-FR4 (para. [037]).

Claim 13 - Claim 13 recites a reader/writer SLG for non-contacting interchange of a sequence of data items D0-D4 with a mobile data memory DT (Fig. 1; para. [039]). The reader/writer SLG has a second coding device KE2 configured to transmit data whose coding is represented by a first transmitted sequence FR0-FR4 having a predetermined number of on and off values Z1, Z0, and to form a count C, from the first transmitted sequence FR0-FR4, the count C representing the predetermined number of on and off values Z1, Z0, by changing a counting direction F, R after each on-value Z1 and by incrementing or decrementing the count C for each off-value Z0 (para. [039]). The second coding device KE2 to generate error information F2, when a first final value EC of the count C, which, together with the data D0-D4, is transmitted as a second coded sequence of the count, differs from a second final value EC2, which is also formed from the first, transmitted sequence FR0-FR4 (para. [039]).

Claim 15 - Claim 15 recites an identification system IS having at least one mobile data memory DT, and a reader/writer SLG (Fig. 1; para. [041]). The mobile data memory DT and the reader/writer SLG interchange sequences of data D1-D4 via a non-contacting data transmission

path LS (Fig. 1; para. [041]). A coding of the data is represented by a first transmitted sequence FR0-FR4 having a predetermined number of on and off values Z1, Z0 (para. [021]). Further, at least one of the mobile data memory DT and the reader/writer SLG has a cycle counter CNT configured to form a count C, from the first transmitted sequence FR0-FR4, the count representing the predetermined number of on and off values Z1, Z0, by changing a counting direction F, R after each on-value Z1 and by incrementing or decrementing the count C for each off-value Z0, and a comparison unit VM to generate error information F1, when a first final value EC of the count C, which, together with the data D0-D4, is transmitted as a second coded sequence SIG of the count C, differs from a second final value EC1, which is also formed from the first transmitted sequence FR0-FR4 (para. [037]).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Claim 1 stands rejected under 35 U.S.C. § 103(a), as allegedly being unpatentable over Masao (JP 59045738) in view of Thompson (U.S. 3,699,479).

B. Claims 2 and 3 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Masao, Thompson and Roche (US 4,138,596).

C. Claim 4 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Masao, Thompson, Roche and Sainomoto (US 2001/0054109 A1).

D. Claims 5 and 6 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Masao, Thompson and Boros (US 4,095,165).

E. Claim 7 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Masao, Thompson and Fairbairn (US 4,181,850).

F. Claims 8-10 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Masao, Thompson and Sato (US 4,087,627).

G. Claims 11-15 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Masao, Thompson and Gomm (US 5,650,761).

H. Claims 16-19 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Masao, Thompson, Kuttruff (US2002/0080864 A1) and Eckstein (US 2001/0040507 A1).

VII. ARGUMENT

I. Rejections under 35 U.S.C. § 103(a) in view of over Masao and Thompson

The Examiner has rejected claim 1 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Masao in view of Thompson.

Appellant submits that claim 1 is patentable over the cited references. For example, claim 1 recites forming a count from a first transmitted sequence. Claim 1 further recites generating error information when a first final value of the count differs from a second final value, where the second final value is also formed from the first transmitted sequence.

In the August 11, 2006, Final Office Action, the Examiner continues to maintain that the above features are taught in the Abstract of Masao. The English Abstract of Masao specifically discloses that set data is set to a shift register SFT_1 directly or to a switching circuit MPX. A transmission signal SD is input to an up/down counter UDCNT. When transmission of data is finished, the UDCNT count is stopped and transmission of an end signal END is set. The MPX selects outputs of the UDCNT and the result is set to the SFT_1. The set data is then transmitted to a receiving side. Receiving data RD at the receiving side is input to an SFT_2, which is shifted and output as parallel data. The RD signal is counted at the UDCNT and when the final data is received, coincidence of the data is checked at the comparison circuit CMP.

In the May 16, 2006 Response, Appellant specifically requested the Examiner to indicate where the claimed first transmitted sequence, first final value and second final value are taught in the Abstract of Masao. In response to this request, the Examiner appears to maintain that the set data of Masao discloses the claimed first transmitted sequence, the end result determined by the

MPX discloses the claimed first final value and the end result count of the RD signal discloses the claimed second final value (pg. 2 of the August 11, 2006 Final Office Action). Appellant submits, however, that as recited in claim 1, both the first final value and the second final value are determined from the first transmitted sequence. Appellant submits that since the alleged second final value of Masao is formed from the *RD signal* rather than the *set data* (alleged first transmitted sequence), Masao fails to teach or suggest the claimed second final value.

In the October 19, 2006, Advisory Action, the Examiner responded to the above arguments by merely reiterating the English Abstract of the Masao reference. Therefore, Appellant presents the following additional comments. Assuming *arguendo* that the RD signal is used to determine the second final value, the RD signal is only sent to the shift register SFT2 and the UDCNT. Values from these two elements appear to be compared at the comparison circuit CMP (figure of Abstract). Appellant submits, however, that there is no teaching or suggestion that the UDCNT value of transmission signal SD is compared with the value of the UDCNT of the receiving data RD.

The Thompson reference is directed towards electrical modulation systems, such as differential phase shift keying systems. Since Thompson fails to cure the deficient teachings of Masao set forth above, Appellant submits that claim 1 is patentable over the cited references.

II. Rejections under 35 U.S.C. § 103(a) in view of Masao, Thompson and Roche

The Examiner has rejected claims 2-3 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Masao, Thompson and Roche. However, since claims 2 and 3 are dependent

upon claim 1, and Roche fails to cure the deficient teachings of Masao and Thompson in regard to claim 1, Appellant submits that claims 2 and 3 are patentable at least by virtue of their dependency.

III. Rejections under 35 U.S.C. § 103(a) in view of Masao, Thompson, Roche and Sainomoto

The Examiner has rejected claims 4 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Masao, Thompson, Roche and Sainomoto. However, since claim 4 is dependent upon claim 1, and Roche and Sainomoto fail to cure the deficient teachings of Masao and Thompson, in regard to claim 1, Appellant submits that claim 4 is patentable at least by virtue of its dependency.

IV. Rejections under 35 U.S.C. § 103(a) in view of Masao, Thompson and Boros

The Examiner has rejected claims 5-6 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Masao, Thompson and Boros. However, since claims 5 and 6 are dependent upon claim 1, and Boros fails to cure the deficient teachings of Masao and Thompson, in regard to claim 1, Appellant submits that claims 5 and 6 are patentable at least by virtue of their dependency.

V. Rejections under 35 U.S.C. § 103(a) in view of Masao, Thompson and Fairbairn

The Examiner has rejected claim 7 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Masao, Thompson and Fairbairn. However, since claim 7 is dependent upon

claim 1, and Fairbairn fails to cure the deficient teachings of Masao and Thompson, in regard to claim 1, Appellant submits that claim 7 is patentable at least by virtue of its dependency.

VI. Rejections under 35 U.S.C. § 103(a) in view of Masao, Thompson and Sato

The Examiner has rejected claims 8-10 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Masao, Thompson and Sato. However, since claims 8-10 are dependent upon claim 1, and Sato fails to cure the deficient teachings of Masao and Thompson, in regard to claim 1, Appellant submits that claims 8-10 are patentable at least by virtue of their dependency.

VII. Rejections under 35 U.S.C. § 103(a) in view of Masao, Thompson and Gomm

The Examiner has rejected claims 11-15 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Masao, Thompson and Gomm.

A. Claims 11, 13 and 15

Since claims 11, 13 and 15 contain features that are analogous to the features discussed above in regard to claim 1, and Gomm fails to cure the deficient teachings of Masao and Thompson regarding claim 1, Appellant submits that claims 11, 13 and 15 are patentable for at least analogous reasons as claim 1.

B. Claims 12 and 14

Since claims 12 and 14 are dependent upon one of claims 11 and 13, Appellant submits that such claims are patentable at least by virtue of their dependency.

VIII. Rejections under 35 U.S.C. § 103(a) in view of Masao, Thompson, Gomm, Kuttruff and Eckstein

The Examiner has rejected claims 16-19 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Masao, Thompson, Kuttruff and Eckstein. However, since claims 16-19 are dependent upon claim 15, and Kuttruff and Eckstein fail to cure the deficient teachings of Masao and Thompson, in regard to claim 15, Appellant submits that claims 16-19 are patentable at least by virtue of their dependency.

Unless a check is submitted herewith for the fee required under 37 C.F.R. §41.37(a) and 1.17(c), please charge said fee to Deposit Account No. 19-4880.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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WASHINGTON OFFICE
23373
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Date: January 10, 2007

CLAIMS APPENDIX

CLAIMS 1-19 ON APPEAL:

1. (rejected) A method for protected transmission of data whose coding is represented by a first transmitted sequence having a predetermined number of on and off values, comprising:

forming a count, from the first transmitted sequence, the count representing the predetermined number, by changing a counting direction after each on-value and by incrementing or decrementing the count for each off-value; and

generating error information when a first final value of the count, which, together with the data, is transmitted as a second coded sequence of the count, differs from a second final value, which is also formed from the first transmitted sequence.

2. (rejected) The method as claimed in claim 1, wherein the first, transmitted sequence is structured in a sequence of time slot frames.

3. (rejected) The method as claimed in claim 2, wherein a time slot frame representing a data item is coded by the predetermined number of on and off values.

4. (rejected) The method as claimed in claim 2, wherein the sequence of time slot frames is followed by a respectively structured signature frame, which includes the coded sequence of the count.

5. (rejected) The method as claimed in claim 1, wherein the count assumes periodic values.

6. (rejected) The method as claimed in claim 5, wherein the periodic values of the count are numerical values in a numerical system.

7. (rejected) The method as claimed in claim 1, wherein the coding of all the on and off values to be transmitted is carried out in a manner that an on-value is followed by at least one off-value.

8. (rejected) The method as claimed in claim 1, wherein an on-value is formed by a pulse sequence.

9. (rejected) The method as claimed in claim 8, wherein the pulse sequence has an even number of pulses and pauses with a same duty ratio.

10. (rejected) The method as claimed in claim 9, wherein a pulse is associated with a predetermined number of carrier oscillations.

11. (rejected) A mobile data memory for non-contacting interchange of a sequence of data items with a reader/writer, the mobile data memory comprising a first coding device configured

(a) to transmit data whose coding is represented by a first transmitted sequence having a predetermined number of on and off values;

(b) to form a count, from the first transmitted sequence, the count representing the predetermined number of on and off values, by changing a counting direction after each on-value and by incrementing or decrementing the count for each off-value; and

(c) to generate error information, when a first final value of the count, which, together with the data, is transmitted as a second coded sequence of the count, differs from a second final value, which is also formed from the first transmitted sequence.

12. (rejected) The mobile data memory as claimed in claim 11, wherein the first coding device comprises:

a cycle counter for forming the count; and

a comparison unit for generating a first error message, when the first final value of the count differs from the second final value.

13. (rejected) A reader/writer for non-contacting interchange of a sequence of data items with a mobile data memory, the reader/writer comprising a second coding device configured

(a) to transmit data whose coding is represented by a first transmitted sequence having a predetermined number of on and off values;

(b) to form a count, from the first transmitted sequence, the count representing the predetermined number of on and off values, by changing a counting direction after each on-value and by incrementing or decrementing the count for each off-value; and

(c) to generate error information, when a first final value of the count, which, together with the data, is transmitted as a second coded sequence of the count, differs from a second final value, which is also formed from the first, transmitted sequence.

14. (rejected) The reader/writer as claimed in claim 13, wherein the second coding device comprises

a cycle counter for forming the count; and

a comparison unit for generating a second error message, when the first final value of the count differs from the second final value.

15. (rejected) An identification system, comprising

at least one mobile data memory; and

a reader/writer;

wherein the mobile data memory and the reader/writer interchange sequences of data via a non-contacting data transmission path;

wherein a coding of the data is represented by a first transmitted sequence having a predetermined number of on and off values; and

wherein at least one of the mobile data memory and the reader/writer comprises:

a cycle counter configured to form a count, from the first transmitted sequence, the count representing the predetermined number of on and off values, by changing a counting direction after each on-value and by incrementing or decrementing the count for each off-value; and

a comparison unit to generate error information, when a first final value of the count, which, together with the data, is transmitted as a second coded sequence of the count, differs from a second final value, which is also formed from the first transmitted sequence.

16. (rejected): The identification system as claimed in claim 15, wherein the identification system is configured to operate in an ISM frequency band on the basis of the ISO/IEC 14443 standard.

17. (rejected) The identification system as claimed in claim 15, wherein the identification system is configured to operate in an ISM frequency band on the basis of the ISO/IEC 15693 standard.

18. (rejected) The identification system as claimed in claim 16, wherein the ISM frequency band comprises a 13.56 MHz frequency band.

19. (rejected) The identification system as claimed in claim 17, wherein the ISM frequency band comprises a 13.56 MHz frequency band.

EVIDENCE APPENDIX:

NONE

RELATED PROCEEDINGS APPENDIX

NONE